

**REMARKS**

Claims 1-19 are pending in the subject application. Claims 1, 6, 10, 11, 12, 13, 14 and 17 are independent.

Applicants appreciate the Examiner's acknowledgement of applicants' claim for foreign priority and receipt of a certified copy of the priority document.

Applicants request, in the next Office action, that the Examiner indicate the acceptability of the drawings filed on September 8, 2003.

Applicants appreciate the Examiner's consideration of applicants' Information Disclosure Statement filed September 8, 2003.

**A. Introduction**

In the outstanding Office action, the Examiner rejected claims 1, 5, 6, 8, 10, 14 and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,993,314 to Lim et al. ("the Lim et al. reference") in view of U.S. Patent Application Publication No. 2003/0114129 to Jerng ("the Jerng reference") and U.S. Patent No. 6,215,988 to Matero ("the Matero reference"); rejected claims 2, 3, 9 and 15 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference and the Matero reference in view of U.S. Patent No. 5,929,716 to Komori et al. ("the Komori et al. reference"); rejected claims 4 and 7 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference and the Matero reference in view of U.S. Patent No. 5,929,708 to Davis et al. ("the Davis et al. reference"); rejected claims 11, 12 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Komori et al. reference; and rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Jerng reference.

B. Asserted Obviousness Rejection of Claims 1, 5, 6, 8, 10, 14 and 16-18

In the outstanding Office action, the Examiner rejected claims 1, 5, 6, 8, 10, 14 and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference and the Matero reference. The rejection is respectfully traversed for at least the following reasons.

The Office action states that the Lim et al. reference discloses a phase locked loop, as recited in independent claims 1, 6, 10, 14 and 17. Applicants respectfully disagree.

The Lim et al. reference fails to disclose or suggest the combination of features recited in each of independent claims 1, 6 and 10 including, *inter alia*, a phase locked loop for receiving a reference frequency signal and a signal output from a voltage controlled oscillator and for generating a control voltage for controlling the frequency of the signal output from the voltage controlled oscillator. Similarly, applicants submit that the Lim et al. reference fails to disclose or suggest the combination of features recited in independent claims 14 and 17 including, *inter alia*, receiving a reference frequency signal and a signal output from a voltage controlled oscillator and generating a control voltage that controls a frequency of the signal output from the voltage controlled oscillator.

Applicants respectfully note that it is not sufficient for the applied references to merely disclose a phase locked loop, the applied references must disclose a phase locked loop that satisfies all the claimed features of the phase locked loop. Thus, for example, with regard to claims 1, 6 and 10, the phase locked loop must at least (a) receive a reference frequency signal, (b) receive a signal output from a voltage controlled oscillator, and (c) generate a control voltage for controlling the frequency of the signal output from the voltage controlled oscillator. The same requirement, e.g., of satisfying every recited feature of each claimed element, also applies

to the other respective elements of each of the claims. Thus, for each pending claim, applicants respectfully request that the combination of claimed elements, including the claimed features of each of the claimed elements, be considered.

Although the Lim et al. reference may disclose phase locked loop circuitry 840, 843, as shown in FIG. 8, neither of the phase locked loop circuits 840, 843 of the Lim et al. reference receive a signal output from a voltage controlled oscillator, and generate a control voltage for controlling the frequency of the signal output from the voltage controlled oscillator. As shown in FIG. 8 of the Lim et al. reference, the local oscillator circuitry 222, which includes the phase locked loop circuitry 840, 843, receives the reference signal 220 (col. 6, lines 38-42) and outputs RF LO signal 454 and IF LO signal 457 (col. 14, lines 54-58). The Lim et al. reference fails to disclose or suggest that the phase locked loop circuitry, e.g., receives a signal output from a voltage controlled oscillator, and generates a control voltage for controlling the frequency of the signal output from the voltage controlled oscillator, as recited in claims 1, 6 and 10. Similarly, applicants submit that the Lim et al. reference fails to disclose or suggest, *inter alia*, receiving a reference frequency signal and a signal output from a voltage controlled oscillator, and generating a control voltage that controls a frequency of the signal output from the voltage controlled oscillator, as recited in claims 14 and 17.

Applicants submit that the Jerng reference and the Matero reference also fail to disclose or suggest, *inter alia*, a phase locked loop including all the claimed features recited in claims 1, 6 and 10 and/or receiving a reference frequency signal and a signal output from a voltage controlled oscillator and generating a control voltage that controls a frequency of the signal output from the voltage controlled oscillator, as recited in claims 14 and 17. For at least these reasons, applicants submit that the combination of the Lim et al. reference, the Jerng reference

and the Matero reference fails to disclose or suggest the combination of features recited in each of independent claims 1, 6, 10, 14 and 17, as well as all the features of claims 5, 8, 16 and 18, which depend from one of claims 1, 6, 14 and 17. It is respectfully requested that the rejection be withdrawn.

C. Asserted Obviousness Rejection of Claims 2, 3, 9 and 15

In the outstanding Office action, the Examiner rejected claims 2, 3, 9 and 15 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference and the Matero reference in view of the Komori et al. reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, the combination of the Lim et al. reference, the Jerng reference and the Matero reference fails to disclose or suggest all the features of independent claims 1, 6 and 14, from one of which claims 2, 3, 9 and 15 directly or indirectly depend. Applicants submit that the Komori et al. reference fails to overcome the deficiencies of the combination of the Lim et al. reference, the Jerng reference and the Matero reference, as applied to claims 1, 6 and 14.

For at least these reasons, applicants submit that the combination of Lim et al. reference, the Jerng reference, the Matero reference and the Komori et al. reference fails to disclose or suggest all the features of claims 2, 3, 9 and 15. It is respectfully requested that the rejection be withdrawn.

D. Asserted Obviousness Rejection of Claims 4 and 7

In the outstanding Office action, the Examiner rejected claims 4 and 7 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference and the Matero reference in view of the Davis et al. reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, the combination of the Lim et al. reference, the Jerng reference and the Matero reference fails to disclose or suggest all the features of independent claims 1 and 6, from which claims 4 and 7 respectively depend. Applicants submit that the Davis et al. reference fails to overcome the deficiencies of the combination of the Lim et al. reference, the Jerng reference and the Matero reference, as applied to claims 1 and 6.

For at least these reasons, applicants submit that the combination of Lim et al. reference, the Jerng reference, the Matero reference and the Davis et al. reference fails to disclose or suggest all the features of claims 4 and 7. It is respectfully requested that the rejection be withdrawn.

E. Asserted Obviousness Rejection of Claims 11, 12 and 19

In the outstanding Office action, the Examiner rejected claims 11, 12 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Komori et al. reference. The rejection is respectfully traversed for at least the following reasons.

Page 14 of the Office action states that the Lim et al. reference discloses a phase locked loop, as recited in independent claims 11 and 12. Applicants respectfully disagree. As discussed above, with regard to independent claims 1, 6 and 10, the Lim et al. reference fails to disclose or suggest a phase locked loop that receives a signal output from a voltage controlled oscillator, and generates a control voltage for controlling the frequency of the signal output from the voltage controlled oscillator, as recited in claims 11 and 12. Further, as discussed above, applicants respectfully request the every claimed feature of every claimed element of each claim be considered.

Applicants submit that the Komori et al. reference also fails to disclose or suggest, *inter alia*, a phase locked loop having all the features recited in independent claims 11 and 12. For at

least these reasons, applicants submit that the combination of the Lim et al. reference and the Komori et al. reference fails to disclose or suggest all the features of claims 11 and 12.

With regard to claim 19, although claim 19 is rejected under 35 U.S.C. §103(a) over the Lim et al. reference in view of the Komori et al. reference, page 16 of the Office action states that the combination of the Lim et al. reference, the Jerng reference and the Matero reference disclose the data transmitting method of independent claim 17, from which claim 19 depends. As discussed above with regard to claim 17, however, the combination of the Lim et al. reference, the Jerng reference, the Mateo reference fails to disclose or suggest, *inter alia*, receiving a reference frequency signal and a signal output from a voltage controlled oscillator and generating a control voltage that controls a frequency of the signal output from the voltage controlled oscillator, as recited in claim 17. The Kimori et al. reference also fails to overcome the deficiencies of the combination of the Lim et al. reference, the Jerng reference, the Mateo reference, as applied to claim 17, from which claim 19 depends.

For at least these reasons, applicants submit that the combination of the Lim et al. reference, the Jerng reference, the Mateo reference, and the Kimori et al. reference fails to disclose or suggest all the features of claim 19. It is respectfully requested that the rejection be withdrawn.

F. Asserted Obviousness Rejection of Claim 13

In the outstanding Office action, the Examiner rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Jerng reference. The rejection is respectfully traversed for at least the following reasons.

Page 17 of the Office action states that the Lim et al. reference discloses a phase locked loop as recited in independent claim 13. Applicants respectfully disagree.

As discussed above, with regard to independent claims 1, 6 and 10, the Lim et al. reference and the Jerng reference both fail to disclose or suggest, *inter alia*, a phase locked loop that receives a signal output from a voltage controlled oscillator, and generates a control voltage for controlling the frequency of the signal output from the voltage controlled oscillator, as recited in claim 13. For at least these reasons, applicants submit that the combination of Lim et al. reference and the Jerng reference fails to disclose or suggest the combination of features recited in claim 13. It is respectfully requested that the rejection be withdrawn.

G. Conclusion

The remaining documents cited by the Examiner were not relied on to reject the claims. Therefore, no comments concerning these documents are considered necessary at this time.

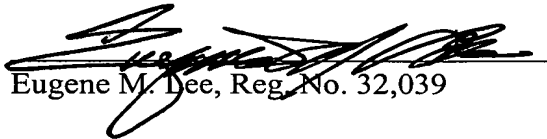
If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

LEE & MORSE, P.C.

Date: May 30, 2006

  
Eugene M. Lee, Reg. No. 32,039

**LEE & MORSE, P.C.**  
1101 WILSON BOULEVARD, SUITE 2000  
ARLINGTON, VA 22209  
703.525.0978 TEL  
703.525.4265 FAX

PETITION and  
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.